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| 09/136,342 | 08/19/98 | FORREST | S 10020/11901 |

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EXAMINER

YAMNITZKY, M

ART UNIT

PAPER NUMBER

1774

16

DATE MAILED: 05/10/01

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.
09/136,342

Applicant(s)
Stephen R. FORREST et al.

Examiner
M. Yamnitzky

Art Unit
1774



-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE three (3) MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on Mar 26, 2001
- 2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 29-35 and 54-63 is/are pending in the application.
- 4a) Of the above, claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 31, 35, and 57-63 is/are allowed.
- 6) ☒ Claim(s) 29, 30, 32-34, and 54-56 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are objected to by the Examiner.
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

- 13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
- a) ☐ All b) ☐ Some* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

*See the attached detailed Office action for a list of the certified copies not received.

- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

- 15) ☐ Notice of References Cited (PTO-892)
- 16) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 17) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s). _____
- 18) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 19) ☐ Notice of Informal Patent Application (PTO-152)
- 20) ☐ Other:

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1. This Office action is in response to applicants' amendment received 03/26/01 (Paper No. 15) which amends the specification and claims 29, 31 and 57.

Claims 29-35 and 54-63 are pending.

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

2. The rejection of claims 29-35 and 54-56 under 35 U.S.C. 112, second paragraph as set forth in Paper No. 13 is overcome by applicants' amendment of claim 29.

The rejection of claims 57-63 under 35 U.S.C. 103(a) as set forth in Paper No. 13 is overcome by applicants' amendment of claim 57.

3. Claims 31, 35 and 57-63 are allowed.

4. Claims 29, 30, 32-34 and 54-56 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Suzuki et al. (5,350,459) in view of Sariciftci et al. (5,331,183) for reasons of record in Paper No. 13.

5. Applicants' arguments filed 03/26/01 have been fully considered but they are not persuasive with respect to the patentability of claims 29, 30, 32-34 and 54-56 over the prior art.

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Applicants argue that the examiner is improperly using hindsight reasoning. Applicants argue that the examiner has not pointed to any prior art teaching or suggestion regarding the desirability of employing two transparent electrodes and that neither Suzuki nor Sariciftci teach such a desirability. Applicants argue that the examiner is relying on present applicants' teaching of employing two transparent electrodes in order to improve external quantum efficiencies and/or photosensitivities in selected spectral regions.

The examiner respectfully disagrees. With respect to applicants' argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).

In the present case, Suzuki et al. disclose an organic photovoltaic element (an organic photosensitive optoelectronic device) comprising two electrodes, with four photoconductive organic layers disposed between the two electrodes. As disclosed and claimed by Suzuki et al., at least one of the two electrodes is transparent (emphasis added). Thus, as would be readily recognized by one of ordinary skill in the art, Suzuki's disclosed and claimed organic photovoltaic element may have one transparent electrode, or may have two transparent electrodes. It takes no great stretch of the imagination for one of ordinary skill in the art to realize that Suzuki et al.

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contemplate organic photovoltaic elements in which four photoconductive organic layers are disposed between two transparent electrodes, and to realize that Suzuki's claims encompass organic photovoltaic elements in which the first and second electrodes are both transparent.

Contrary to applicants' arguments, the examiner has not relied on present applicants' teaching of employing two transparent electrodes in order to improve external quantum efficiencies and/or photosensitivities in selected spectral regions. Rather, the examiner stated that it would have been obvious to make Suzuki's photovoltaic element with two transparent electrodes so as to attain advantages such as being able to expose the photoconductive layers to electromagnetic radiation through either electrode. As taught in the first paragraph of column 4 of the Suzuki patent, the light incident side of the photovoltaic element must have an electrode with high transparency. From this teaching and as a matter of common sense, one of ordinary skill in the art would readily recognize that by having two transparent electrodes, either side of the photovoltaic element can be the light incident side, and the photovoltaic element will be functional regardless of which side the light is incident upon.

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37

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CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

7. Any inquiry concerning this communication should be directed to Marie R. Yamnitzky at telephone number (703) 308-4413. The examiner can generally be reached at this number from 6:45 a.m. to 3:15 p.m. Monday-Friday.

The current fax numbers for Art Unit 1774 are (703) 305-3599 for official after final faxes and (703) 305-5408 for all other official faxes. (Unofficial faxes for Art Unit 1774 can be sent to (703) 305-5436.)

MRY
05/10/01



MARIE YAMNITZKY
PRIMARY EXAMINER

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